

Claims

1. An applier for an anastomosis ring device having proximal, center, and distal rings connected respectively by proximal and distal hinged arms, the ring device having a generally cylindrical shape when unactuated and a rivet shape when actuated, the applier comprising:
 - 5 an elongate implement portion;
 - a handle connected to the implement portion;
 - an actuating member internally engaged to a selected one of the rings of the anastomosis device;
 - an arresting member internally engaged to a selected second of the rings of the
 - 10 anastomosis device; and
 - a control coupled to the handle operably configured to cause movement of the actuating member, and thus the engaged ring, toward the arresting member, and thus the selected second ring, causing actuating the interposed hinged arms of the ring device.
2. The applier of claim 1, wherein the actuating member is engaged to the distal ring.
3. The applier of claim 2, wherein the arresting member is internally engaged to the proximal ring.
4. The applier of claim 3, further comprising a second control coupled to the handle and operably configured to cause distal movement of the arresting member toward the actuating member.
5. The applier of claim 3, wherein the arresting member engages the center ring, the applier further comprising:
 - a second actuating member engaged to the proximal ring; and
 - a second control coupled to the handle and operably configured to distally move the
 - 5 proximal ring toward the center ring.
6. The applier of claim 1, wherein the actuating member is engaged to the center ring.

7. The applier of claim 6, wherein the implement portion further comprises a shaft connected to the handle and distally contacting the proximal ring of the ring device, the applier further comprising a second actuating member internally engaged to the distal ring of the ring device.
8. The applier of claim 1, wherein the actuating member distally terminates in a catch.
9. The applier of claim 8, wherein the actuating member includes a releasing surface responsive to an actuated condition of the ring device to disengage the actuating member from the selected ring of the ring device.
10. The applier of claim 9, further comprising a distal tip illuminator connected to the implement portion.
11. The applier of claim 1, wherein the implement portion is dimensionally sized for endoscopic surgical use.

12. An applier for an anastomotic ring device having a center circular portion longitudinally connected by a plurality of proximal arms to a proximal ring and by a plurality of distal arms to a distal ring, the ring expanding each plurality of arms by
5 compressing a respective ring toward the center circular portion, the applier comprising:
a first member operative to internally engage and longitudinally move a selected one of a group consisting of the proximal ring, center circular portion, and distal ring; and
a second member operative to internally engage another one of the group to thereby mechanically ground for actuating at least one plurality of arms.

13. The applier of claim 12, wherein the center circular portion of the ring device comprises a center ring, the second member engaged to center ring.

14. The applier of claim 13, wherein the second member further operably configured to longitudinally move the center ring.

15. The applier of claim 13, wherein the first and second members comprise a releasable engagement mechanism responsive to an actuated condition of the anastomotic device.

16. The applier of claim 13, further comprising a handle operably configured to position the first member.

17. the applier of claim 16, further comprising a cannula supporting the first and second members and operatively configured to distally receive the anastomotic device, dimensioned for endoscopic use.

18. An applier for an anastomotic ring device having a center ring longitudinally connected by a plurality of proximal arms to a proximal ring and by a plurality of distal arms to a distal ring, the ring expanding each plurality of arms by compressing a respective ring toward the center circular portion, the applier comprising:
- 5 a means for inserting an unactuated anastomotic ring device to an anastomotic surgical site;
- a means for inwardly compressing proximal and distal rings to actuate both plurality of arms.
19. The applier of claim 18, further comprising a means for compressing one of a group consisting of the proximal and distal rings toward the center ring to actuate one interposed plurality of arms.
20. The applier of claim 18, further comprising a handle means for independently actuating either plurality of arms.